

THE

SALEM LEG,

UNDER THE PATRONAGE

OF THE

United States Government

FOR THE USE OF THE

ARMY AND NAVY.

OFFICE OF

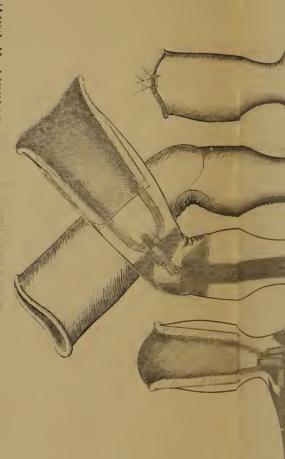
SALEM LEG COMPANY. 1864.

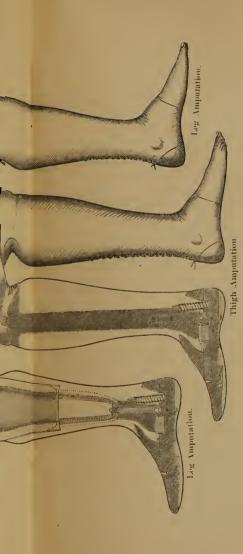




The Antem Try,

Patented June 21 and July 22, 1862, and October 1, 1861.





MANUFACTURED BY THE

SALEM LEG COMPANY, SALEM, MASS.



CIRCULAR NUMBER FIVE.

THE SALEM LEG,

UNDER THE PATRONAGE OF

The United States Government

FOR THE USE OF THE ARMY.

This original, simple, and elegant leg, is now manufactured by the Salem Leg Company, which has established its Office and Manufactory at No. 26 Lynde St. Salem, Mass. The legs are manufactured under the immediate superintendence of the Inventor and Patentee,—Prof. Geo. B. Jewett of Salem, -- who does not claim to have made an improvement on any particular limb or limbs now before the public, but to have originated a method of constructing artificial legs, which is essentially different from all other methods, and in many respects not only really, but obviously superior. This superiority is not found in any single peculiarity, but in many features of the invention, as will appear under the head of "Advantages," The Inventor has been using these limbs for nearly three years; and the opinion frequently expressed to him by surgeons and others, of the best judges, who have witnessed its action in conferring an easy, natural, and graceful step, fully justifies him in challenging a comparison of results, in these particulars, with any wearer of an artificial limb made in this country, or in Europe.

DESCRIPTION.

The Inventor of this leg having learned, from painful experience, that wood-the material commonly used for sockets -was entirely unsuitable for his case, determined to select such materials, not merely for the socket but for every part of the leg, as were best adapted to secure the ends in view. namely, comfort, strength, durability, convenience, economy and elegance. Accordingly the Salem Leg is Nor a wooden leg. It has two sockets, one of yielding material, which is shaped over a east of the stump, and another of sheet metal. which serves as a light, firm, yet slightly clastic case for the soft socket. The exterior, or metallic socket, is mounted on steel supporters, which, uniting at a suitable distance below the stump, are connected with a screw proceeding from the joint. The joints are of steel, and are so constructed as to secure steadiness, smoothness and silence of action. The action at the joints is limited by shoulders and cushions, all cords being dispensed with. The shaping up of the leg is done with hair and other suitable materials; and the covering is of flesh-colored leather, so attached that it can be removed or replaced with little inconvenience or expense. The whole leg is so put together that it may be taken apart, readjusted and reconstructed, with the utmost facility.

ADVANTAGES.

The advantages claimed for this leg are:—First, the main support is central rather than from the circumference. This peculiarity secures compactness, firmness, and the best method of limiting the action of the knee and ankle by means of a shoulder and cushion. Second, the mode of mounting the socket on its supporters, secures the utmost accuracy in the adjustment of the line of support. Third, by the use of two

concentric sockets, as described above, there can be secured, with absolute certainty, a perfect uniformity of pressure on all parts of the stump, (the end of course always excepted,) since all changes designed to equalize the pressure, can be made between the two sockets by shaving or padding, as the case may be, the outside of the soft one. The importance of this peculiarity of construction cannot be over-estimated. No matter what may be the excellence of a leg in other respects, if the socket does not fit the stump, the leg is worthless. It is worse than worthless. It becomes an instrument of torture. causing irritation, soreness, swelling and extreme suffering. Fourth, this perfect adaptation of the socket to the stump entirely supersedes the necessity of that broad band of stiff leather which, in cases of amputation below the knee, has heretofore been commonly used, and which, being laced tightly round the thigh, is a source of great discomfort as well as danger. This broad band of leather, with its unsightly joints at the knee, is designed to remedy the imperfections of the socket, by transferring a part of the pressure from the stump, where it belongs, but where the imperfectly fitting socket forbids it being taken, to the thigh, where the muscles should be left as free as in nature. This perfect freedom at the thigh, and, consequently, natural play of the muscles, and unimpeded circulation of the blood, is perfectly secured to the wearer of the Salem Leg, simply by adapting the socket to the stump, and then dispensing with an uncomfortable and injnrious appendage to the artificial leg, by which it should never have been encumbered. It will be readily inferred that a band laced tightly around the thigh must so impede the circulation, as to expose the wearer to those fearful consequences, atrophy of the thigh and varicose veins. Fifth, the socket is connected with the joints by means of a metallic plate and screw, which latter is one solid piece with the axle of the

joints. This arrangement secures, with mathematical precision, the final adjustment of the length of the leg and position of the foot. It also facilitates the use of the firmest and most durable kind of joint, and one which is perfectly noiseless in its action. Another advantage of this arrangement is that it renders the leg easily dissectible. Sixth, the action, both at the knee and ankle, being limited by a shoulder and cushion, all danger of excessive action is effectually obviated. Thus, too, the limb can be worn with a feeling of much greater security. The wearer feels equally secure against pitching forward, and against the opposite danger of having the leg give way under him. Seventh, the knee-spring is so attached, that the wearer can vary its tension at pleasure. Eighth, if, owing to the shortness of the stump, the single strap by which, in cases of amputation below the knee, the leg is ordinarily supported, is found insufficient, the Inventor of the Salem Log has devised a mothod of overcoming the difficulty, which is entirely new and equally effectual. A secondary strap, altogether peculiar to this invention, is applied in such a way as to hold the leg firmly up to its bearing in every possible position of the body. This strap is specially serviceable in horse-back riding. It also enables the wearer to walk up stairs and down with a natural alternating step, without inconvenience from the sagging of the artificial leg. This great facility in going up and down stairs is, however, owing in part to the freedom of the thigh from the encumbrance of the leather band, used with most other legs, which has been already referred to. Ninth, this limb dispenses with all cords, and consequently is much less likely to get out of order than are most others. No part of the limb can be easily broken. It is, therefore, exceedingly durable, and can be kept in repair with very little expense. Tenth, this leg, in a very large class of cases, is absolutely lighter than wooden legs of equal*

strength. Eleventh, the peculiar construction of the ankle joint obviates the evil so commonly experienced, of a sudden dropping down of the foot in walking, causing a disagreeable clapping sound by which the step of wooden legs is often disagreeably distinguished. The Salem Leg is entirely free from this annoying imperfection. Twelfth, the joints being in all cases concealed from view, the annovance of oil on the surface of the leg and in contact with the clothing, is wholly prevented. Thirteenth, this leg, being shaped up with hair and other suitable materials, is soft to the touch, as in nature. Fourteenth, the steel joints which, in most other legs, form so unsightly a prominence on each side of the knee in cases of leg amputation, are never applied to the Salem Leg. Hence the clothing sets very much more smoothly and naturally. Fifteenth, in cases of long stumps below the knee, the peculiar construction of this leg reduces the ankle to the natural size, which cannot be done where the support is from the circumference. Sixteenth, for cases of thigh amputation, the mode of making the socket adds greatly to the comfort of the wearer in sitting down. He is not obliged to sit upon a thick piece of wood, but merely on a soft pad resting on sheet metal. Seventeenth, this leg is attached to the body by a novel and ingenious method, which conduces greatly to the comfort of the wearer. For ladies, especially, this feature is a great improvement on the old method of attachment. Eighteenth, this leg is peculiarly adapted for horse-back riding. Owing to the thinness and yielding nature of the socket, even a full length leg can be worn with comfort. Nineteenth, by an ingenious and perfectly original combination of a check and a spring, the action of the knee-joint, in the full length leg, can be limited to any required degree. In horse-back riding, this peculiarity enables the rider to bear his weight in the stirrup, as with the natural leg, without the constant

danger of having the log spring back, as is commonly the case. · Twentieth, this leg bends far beyond a right angle at the knee, and thus enables the wearer to drop down easily on the knee, and also to draw the foot under when sitting. Twenty-first, the parts at the knee are so shaped and combined, that perfection of form is secured in every position of the knee, even when the leg is bent far under. Twenty-second, the limitation of the action being effected as described above -without cords-the mechanical disadvantage at which the heel-cord acts in wooden legs, is avoided. The foot begins to act at the right instant, and without the painful effort of the stump incident to the other mode of limitation. third, this limitation being gradual, the disagreeable sensation caused by the suddenness of the limitation by cords, is entirely obviated. Twenty-fourth, for amoutations at the ankle joint—as in the Syme's operation—this leg affords unparalleled advantages of treatment. These cases are numerons in the army, and it will be gratifying to the soldier to know that they can now be treated without that unsightly enlargement of the ankle which has heretofore been a valid objection to this mode of amputation. Twenty-fifth, the peculiar construction of the ankle and foot adapts this invention more perfectly than any other can be adapted to cases of shortened limb. The cases of this kind which have been treated by the Salem Leg method, have been remarkably successful

TESTIMONY OF SURGEONS.

As the Salem Leg has received the approval of the United States Government, for the use of the Army, it cannot be necessary to multiply testimonials in its favor. Still the Company are unwilling to withhold entirely the unqualified endorsement which it has received from distinguished surgeons. The following is the language of the venerable Dr. R. D. Mussey, under date of Boston, July 2d, 1862;—"I have examined the models of Mr. George B. Jewett's Artificial Leg, and witnessed its operation in conferring an easy and natural step in walking, and I cannot hesitate to say that for ingenuity and completeness it surpasses everything of the kind I have yet seen."

In a note addressed to the Inventor, dated July 1, 1862, Dr. EDWARD B. Peirson, of Salem, says:—

"I have examined the Artificial Leg invented and patented by you, and do not hesitate to say that it is, in my opinion, superior to any other now in use. There are several points about it which particularly recommend it:—its lightness; the manner of forming and mounting the socket, securing the most perfect adaptation to the stump, with accurate adjustment of the line of support; the simplicity and completeness of the machinery by which the motions of the aukle and knee-joints are imitated; and the facility with which it can be taken apart and repaired, or altered in any part of its adjustment. All these circumstances seem to me to form a combination which has never before been attained. I look to see its general adoption by the class of unfortunates who need such supports, as soon as its superiority becomes known."

To this testimonial Drs. Edward Spalding and George Gray, of Nashua, N. H., give their unqualified approval.

Dr. H. OSGOOD STONE, of Salem, says: "It is a most beautiful and ingenious piece of mechanism, and well calculated to fulfil all the indications required in a good artificial limb."

In March, 1861, Dr. James M. Minor, of Brooklyn, N. Y., presented to the New York Academy of Medicine, in behal of a Committee appointed for the purpose, and of which he was Chairman, an elaborate "Report on Artificial limbs." The other members of the Committee were Drs. E. Krackowizer and J. H. Hinton. In the spring of 1863, the atten-

tion of the Chairman of this Committee was drawn to the Salem Leg; and it is with great satisfaction that we publish the following testimonial from such high authority. In a note addressed to the Inventor, Dr. MINOR says:

"I thought your walking, both on a level, and in ascending and descending a stairway, was incomparably superior to that of any other wearer of artificial legs, who had come under the observation of the Committee; and we saw a great many."

It gives us also much pleasure to introduce the following unsolicited tribute to the excellence of the Salem Leg. reputation of the anthor as an experienced and skillful surgeon and physician gives great weight to his testimony.

> 909 Washington st. Boston, July 16th, 1864.

My Dear Sir:—As surgical attendant of the Discharged Soldiers' Home in this city, I have had occasion to observe a large number of patients wearing artificial limbs. I owe it therefore to you to inform you of the very satisfactory performance of the legs furnished by you, which are by far the best that I have ever seen. Without dwelling upon the excellent mechanical construction of your limb, I would especially commend the very simple and ingenious socket which I consider the great distinctive feature of the "Salem Leg" as compared with all others made and sold in this country. The wooden socket used in the various legs made after the "Palmer" patent has always seemed to me exceedingly imperfect, both from the impossibility of fitting it accurately, and from the great difficulty and expense of altering it to conform to the changes which take place in the form and size of the stump. In providing for the easy adjustment of the socket to the varying conditions of the stump you have, as it seems to me, introduced the greatest of modern improvements in artificial limbs; and the fact that the socket can be so easily and cheaply renewed when necessary is not the least of its advantages. After amputation below the knee, your adjustable socket is especially valuable, avoiding, as it offectually does, the unequal and painful pressure in many cases inseparable from the use of the wooden socket and enabling you to discard the powerful thigh-bands and side-irons which are so often necessarily employed in the "Palmer" and other similar legs.

Wishing you the fullest success in the introduction of your admirable invention.

I am very truly yours,

Rev. Geo. B. Jewett, Salem, Mass.

John Green.

The following is the testimony of the distinguished Surgeon, Dr. Valentine Mott, of New York City:—

"New York, July 18, '64.

"I have carefully examined the Salem Artificial Leg, the Invention of the Rev. Mr. Jewett, and seen him and two other persons walk, one with both legs off below the knee, and the other above the knee. It is an admirable appliance of art, and I have no doubt will be extensively used.

VALENTINE MOTT."

We are happy to be permitted to add the following discriminating testimonial, received since the issue of Circular No. 4.

"Salem, Sept. 26, 1864.

Prof. Geo. B. Jewett:

Dear Sir:—I have examined the "Salem Leg" invented by you, and an confident it is a great improvement on the Palmer Leg or any other artificial limb constructed with a wooden socket,—it being better fitted to the stump, less likely to get out of order, more easily repaired, and more readily altered to suit each individual case. I believe it to be the most comfortable as well as serviceable artificial limb that has yet been invented.

WILLIAM MACK, M. D.

TESTIMONY OF WEARERS.

CASE A.

This is the case of the Inventor. Points of extreme difficulty are involved in this case; which, however, have been overcome by his invention.

The stump is long, tapers but little, is extremely sensitive and subject to severe neuralgic pain. This pain, however, has been greatly mitigated by the use of a socket so constructed as to relieve, entirely, the most sensitive part of the stump from all undue pressure, while, at the same time, uniformity of pressure elsewhere, is effectually secured. This result was obtained by means of changes made on the outside of the soft socket,—a method of adaptation which no other mode of constructing sockets admits of.

The remarkable naturalness of step to which allusion has been before made, is owing, in part, to the *freedom of play* which is given to the cords and muscles by dispensing with an upper socket and throwing all the bearing where nature places it,—on the knee; in part, to the exceedingly easy and natural action of the ankle-joint; and, in no small degree, to the exact graduation of the length of the leg and accurate adjustment of the position of the foot, and of the line of support.

The length of time the Inventor of this leg has had it in actual and constant use—nearly three years,—is a sufficient test of its durability and permanent value.

CASE B.

Thigh amputation. "Stands at work for eight hours a day, without trouble or inconvenience. Frequently walks a mile or two afterwards in the evening. Can walk four or five miles without pain or fatigue. Does not use a caue, feels almost as secure from falling or tripping as with the natural limb."

CASE C.

Leg amputation. Short and crooked stump. After two or three months' experience in the use of the artificial leg, could walk twelve miles a day.

CASE D.

Leg amputation. Tail and heavy person. Short stump. During the first summer after receiving the leg, mowed for six or seven days.

CASE E

Legamputation. Heavy person. Short stump. Had worn wooden sockets several years, which were abandoned from the day of receiving the Salem Leg. Speaks of the relief as "thoroughly enjoyable." Describes the suffering caused by the wooden socket and the band of leather around the thigh as "agony" and "torture."

CASE F.

Leg amputation. Soldier. Government order. Wears the leg with great comfort. Thinks he walks as many miles in a day as any person in the State, who is using an artificial leg. Would sooner pay the full price of a Salem Leg than accept a wooden leg as a gift.

CASE G.

Double Amputation. This is a case of very great interest. It is that of a brave young soldier who suffered unputation of both legs. By special order of the Surgeon-General, U.S. A., this case was treated by the Salem Leg method. The young man now attends to business regularly; walks in the street with a cane, but without one in his store a can go up stairs without depending on either a cane or the balmstrade, and with a natural, alternating step! The use of the artificial legs causes no swelling, soreness or irritation of the stumps.

Case II.

Legamputation. Long stump. Heavy person. Had abaudoned the wooden leg before applying for a Salem Leg, preferring eratches to the torture he had experienced. Says, "I never can be thankful enough for the kind Providence which led the way to the procuring of one of your artificial limbs. I cannot say too much in praise of the Salem Leg, so beautifully adjusted without the use of those painful "lacers" so deleterious to the stump in all respects, impeding circulation, and reducing the leg to a mere 'yulgar fraction."

Case I.

Thigh amputation. Lady. Had worn a wooden socket for several years. Since using the Salem Leg, can walk much farther and better than before, and is comparatively free from pain. "Can imagine nothing more comfortable."

CASE J.

Thigh amputation. Soldier. Had received, and used up in a few months, a Government leg made for him at Washington. Finds the Salem Leg much more comfortable than the wooden one; can walk with it more easily and naturally; and is said, by his fellow soldiers, to walk better than any person they ever saw with an artificial leg. Commonly takes a cane when in the street, but is not dependent upon it. Says he cannot speak in too high praise of the Salem Leg. Often works at a lathe, moving the treadle with his artificial foot.

Case K.

DOUBLE AMPUTATION. This is the case of OTIS BRETT, who, after using the Palmer legs for about three years, abandoned them for a pair of Salem Legs. Mr. Brett testifies that the "Salem Legs are superior, in every respect, to those he had used before; that they are lighter; of better form; more comfortable; have better action; enable him to walk with more steadiness and independence; and leave the circulation unimpeded and the muscles of the thigh free." All that is necessary to convince any impartial observer, of the superiority of the Salem Legs, is, to see the two pairs of legs side by side, and then compare their action in actual use.

CASE L.

Leg amputation. Little girl. Had used a Palmer leg before adopting the Salem Leg. Now walks with wonderful ease and naturalness.

CASE M.

Shortened limb, Lady, Permanent contraction of the cords, preventing the use of the knee-joint, and shortening the leg six inches or more. Considers the Salem "Supporter," very superior to either of the three previously tried.

Can walk with more ease and naturalness than ever before since the limb became contracted. Does not use a cane.

Case N.

Shortened limb. Lady. One limb *cleven* inches shorter than the other. Before receiving the Salem Supporter, could walk only by the use of a stirrup on the side of a cane. Uses the "Supporter" with much comfort. Walks with ease, and without the aid of a cane.

CASE O.

Thigh amputation. This case is of so great interest and importance, that we introduce the testimony of the wearer in his own words.

Prof. Jewett: Emory U. S. General Hospital, July 22, 1864.

I have the honor to address you concerning my artificial leg you made me a short time ago. I shall always feel

under the greatest obligations to you for your perseverance in making a leg for me when all the other manufacturers turned me off, saying "they could do nothing for one who had so short a stump." Indeed I can hardly thank you enough for the interest you took in my case; and had you not been determined to make me walk off like a man again, I should have been to day walking around with crutches.

You can better imagine than I can describe, the surprise of medical men when they inquire "how high my leg was amputated," and I inform them that but two and one-half inches remain. All, at once, decide that my case is a wonderful one, and that they never saw a man walk on an artificial leg with so short a stump. I have worn the leg only two weeks, but put it on in the morning, wear it all around the eamp, and do not take it off until night. Had I five more inches of stump, I think I could take the field and again defend my country, until the Southern traitors find their "last ditch."

Allow me once more to express my heartfelt gratitude in finding an invention so well adapted to my case. And should I meet any similarly afflicted I will take pleasure in recommending to them a patent that cannot fail to please.

Very respectfully, your ob't servant,

JOHN C. HILTON,

Lieut, U. S. A.

CASE P.

Leg amputation. Soldier. Government Order. This case is of peculiar interest from the fact, that, when the leg was applied, the cords were much contracted, so that the stump could not be straightened. And yet, six months after receiving the Salem Leg, the wearer testifies as follows:—

"Nashua July 8, 1864.

"I have not left my leg off a day since I put it on, nor lost a day's time. My stump is free from pain and is entirely straight. My health never was better than it is now. I highly prize the Salem Leg. I should be very sorry to be obliged to use a wooden leg with its uncomfortable and dangerous lacing above the knee. I go up and down stairs without a cane, and lug a pail of water. So I am one of the boys.

DAVID GILSON,"

This case shows, that where an artificial leg is properly applied,—the bearing being taken below the knee, as in the Salem Leg, not above as in the wooden legs,—the natural use of the cords and muscles of the thigh will restore them to their full action.

It should be added that Mr. Gilson's trade is that of a machinist.

CASE Q.

Leg amputation. Soldier. Had worn a Government leg made by Palmer & Co., Boston. After wearing the Salem Leg about five months, the soldier wrote as follows, under date of Roxbury, July 20, 1864:—

"Your limb is far superior to Palmer's artificial Limb. I gave the Palmer leg a trial of four months, and I took no comfort with it whatever. I feel as though I could not say enough in praise of your limb, which I have used about five months. I give you liberty to say what you think best in regard to my case,"

(Signed)

"C. K. CALL."

CASE R.

Leg amputation. Soldier. Had worn a wooden leg made, under Government order, by B. W. Jewett of Washington. On receipt of the Salem Leg, the other was laid aside.

Testifies, "I have worn the leg every day and haven't made a sore; except at first, there was a slight enlargement of the side bone which was injured by the wooden socket. I often walk without a cane, and stand about six hours a day."

CASE S.

Leg amputation. Soldier. Had worn a wooden leg made by Palmer & Co., Boston, which was laid aside for the Salem Leg. Saved twelve ounces in the weight of the leg itself and as much more in the packings required to fill up the wooden socket and the lacer!

CASE T.

Leg amputation. Very short stump, not exceeding three inches. Had used the Bly leg. The Salem Leg was three-fourths of a pound lighter than the wooden leg.

CASE U.

Leg amputation. Weight of the Salem Leg one pound and three ounces less than that of the Palmer leg which he had been using. In addition to which, he was obliged to use more than *five ownces* of socks, or packing, with the wooden leg. Entire saving in weight, more than a *pound and a half!*

CASE V.

KNEE-BEARING. Allusion is made to this case for the purpose of calling attention to the admirable manner in which the Salem Leg adapts itself to every kind of case. The methods of mounting the *cup* for the knee, of attaching the knee spring, of connecting the thigh piece with the representative of the tibia, and of constructing the joint at the knee, so that it could be readily taken apart and readjusted, are equally novel, ingenious and successful.

CASE W.

Leg amputation. Short stump. Had used the Selpho and the Palmer legs. Weight of Salem leg, two pounds and two ounces less than that of the Selpho leg, and one pound and four ounces less than that of the Palmer leg.

CASE X.

Leg amputation. Short Stump. Had used the Palmer leg, which was laid aside for the Salem leg. Worked at haying during the whole season. Preferred mowing to other parts of the work. Could carry a swath with the best mowers in the town. On one occasion, carried two bashels of meal on his back nearly a half mile, over a rough country road! With what other artificial leg, besides the Salem Leg, was such a feat ever performed? With what other leg could it be? What other is strong enough for such a burden? What other could be worn with such a degree of comfort as to enable the wearer to endure so protracted and severe a test?

It thus appears that every class of cases has been treated by the Salem Leg methods, and with uniform success,—long and short stumps, leg and thigh amputations, shortened limbs, and knee bearings. Many of the recent and most interesting cases are not mentioned here, but reserved for mention in future Circulars. In fact, the cases are so numerous, that a particular description of every one cannot be given.



NEW PATENT

The Company are happy to announce that a new patent has just been granted, covering the novel and ingenious arrangement of *straps* invented by Prof. Jewett, by which, in cases of *leg amputation*, the Salem Leg can be worn with safety with even the shortest stumps. These straps have been before alluded to under the head of "Advantages," "cighth."

TERMS.

For thigh amputations, shortened limbs, and knee bearings, \$125. For leg amputations, \$100. In both cases, partial payment is expected at the time of receiving the order and taking the measure, and the balance on delivery of the limb. Proper regard will be had to the circumstances of the poor.

SPECIAL NOTICE TO SOLDIERS.

All Soldiers preferring the Salem Leg, and entitled to Government aid, may receive an order in their favor, on application to the Salem Leg Company, Salem, Mass. The leg will be made without extra charge above the value of the Government order, and will be, in all respects, of the best quality.

Letters addressed to the "Salem Leg Company," Salem Mass., will receive prompt attention.

OFFICERS OF THE SALEM LEG COMPANY.

DIRECTORS. Dr. E. B. Peirson, *President*. John C. Osgood, James O. Safford, George B. Jewett, Charles H. Price, A. Aug. Smith, Joseph C. Foster.

JOSEPH H. WEBB, Clerk and Treasurer.